

What we claim are:

1. A circuit substrate for packaging a semiconductor device, the circuit substrate comprising:

5 input/output terminal electrodes formed on a surface of a main body of the substrate;

conductive adhesive layers adhering onto the terminal electrodes; and

10 a resin film formed on the surface of the substrate so as to cover the conductive adhesive layers together with the terminal electrodes.

2. A circuit substrate to be mounted with a semiconductor device, wherein the circuit substrate comprises:

15 a main body of the circuit substrate having input/output terminal electrodes arranged on a surface thereof;

20 a resin film provided with conductive adhesive layers and an elastomer layer thereon wherein the elastomer layer is previously placed on a surface opposite to a surface on which the conductive adhesive layers are formed and in a position corresponding to at least a part of a surface of the semiconductor device on which a functional part of the semiconductor device resides, and the conductive adhesive layers are placed in positions on the surface of the resin
25 film corresponding to the terminal electrodes on the

surface of the main body of the circuit substrate.

3. A method of producing a circuit substrate to be mounted with a semiconductor device, the method comprising:

applying conductive adhesive by printing onto
5 input/output terminal electrodes formed on a surface of a main body of the substrate and thereby forming conductive adhesive layers; and

after curing the conductive adhesive layers, coating the surface of the substrate with a resin film so as to
10 cover the conductive adhesive layers and the terminal electrodes.

4. A method of producing a circuit substrate for packaging a semiconductor device, the method comprising:

forming previously conductive adhesive layers on a
15 separate resin film to prepare the resin film;

covering the circuit substrate with the resin film so that the conductive adhesive layers face input/output terminal electrodes of the circuit substrate; and

bonding the resin film to the circuit substrate.

20 5. The method of producing a circuit substrate according to Claim 4, wherein conductive adhesive paste is previously applied onto the resin film by printing process with a pattern so as to form the conductive adhesive layers and the resin film is thereby prepared.

25 6. The method of producing a circuit substrate

according to Claim 4, wherein the preparation of the resin film comprises bonding a masking sheet onto the resin film, thereafter boring through holes that extend through the masking sheet, filling the through holes with conductive
5 adhesive, and thereafter removing the masking sheet.

7. The method of producing a circuit substrate according to Claim 6, wherein the masking sheet comprises a resin sheet that is to be bonded onto the resin film and a release sheet that is releasably stuck on the resin sheet.

10 8. The method of producing a circuit substrate according to Claim 4, wherein the method for boring comprises perforating the through holes through the masking sheet by laser illumination.

15 9. The method of producing a circuit substrate according to claim 4, wherein the method of boring comprises perforating the through holes through the masking sheet by ultraviolet illumination.

10. A package structure having a semiconductor device mounted on a circuit substrate, in which:

20 bump electrodes of the semiconductor device are electrically and mechanically connected to conductive adhesive placed on input/output terminal electrodes provided on the circuit substrate,

the semiconductor device and the circuit substrate are
25 bonded and fixed to each other through medium of a resin

film or sealing resin in a space between the semiconductor device and the circuit substrate, and

an elastomer layer that is softer and more elastic than the resin film or the sealing resin is interposed
5 between a functional part of the semiconductor device and the resin film or the sealing resin.

11. A method of producing a package structure having a semiconductor device mounted on a circuit substrate, wherein: the semiconductor device has bump electrodes, the
10 circuit substrate has input/output terminal electrodes on a surface of the substrate,
the method comprising:

applying conductive adhesive layers onto the terminal electrodes of the substrate;

15 covering a resin film on the surface of the substrate including the conductive adhesive layers;

pressing the bump electrodes of the semiconductor device into the resin film melted on the circuit substrate by heating to penetrate through and fixed to the conductive
20 adhesive layers, then the bump electrodes being electrically connected to the corresponding terminal electrodes of the substrate; and

subsequently curing the resin film to join the semiconductor device to the circuit substrate.

25 12. The method of producing a package structure

according to claim 11, wherein liquid sealing resin is used instead of the resin film or with together the resin film on which the liquid sealing resin is applied.

13. A method of producing a package structure having
5 a semiconductor device mounted on a circuit substrate,
wherein:

the semiconductor device has bump electrodes, the circuit substrate has input/output terminal electrodes on a surface of the substrate, a separate resin film has
10 conductive adhesive layers corresponding to the terminal electrodes of the circuit substrate, on one surface of the film, and has an elastomer layer corresponding to the semiconductor device, on the other surface of the film, the method comprises:

15 positioning the resin film correctly on the circuit substrate;

pressing the bump electrodes of the semiconductor device into the resin film melted on the heated circuit substrate to reach the conductive adhesive layers, and are
20 connected to the corresponding terminal electrodes of the substrate,

curing and the resin film to join the semiconductor device to the circuit substrate.

14. A method of producing a package structure,
25 according to claim 11, wherein the semiconductor device has

bump electrodes and an elastomer layer bonded onto a part of a surface corresponding a semiconductor functional part of the semiconductor device, and the package structure has the elastomer layer interposed between the resin layer and the semiconductor device.